ビジネス志向テキストにおける論理構造認識の強化のための４ステージプロセス
-クリティカルシンキングへの最初のステップ-

Four-Stage Process for Enhancing Recognition of Logical Structures in Business-Oriented Texts
-A First Step Towards Critical Thinking-

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本論文では、獨協大学入学者初年度の必修科目であるビジネスイングリッシュ志向のインターナショナルコミュニケーションコースの４つの授業において、現在行っている学生の学習について論じている。このコースでは、論理的、または、会話的なスピーチやライティングに関連した文章における特定の項目に注目するように指導している。専門的な英語文章の理解力、ディスカッションの能力、スピーチの能力、ディベートの能力、そして、国際社会において重要な役割を果たせる能力を有する卒業生を輩出するという獨協大学のポリシーに基づいて、著者は、学生が将来、競争的なグローバル市場において彼らの会社の体面を保つことができるような人材になれるように、西洋の修辞技法に見られる論理形式に対する意識をより高めることを目指した補助的なレッスンを実施した。著者は、これを、以下によって達成した：第一に、英語学習者用にデザインされたポッドキャストによる議論の基本項目の導入である。第二に、ポッドキャストの各エピソードにおいて提供されるレッスンのグループ討論中の語彙の活用である。第三に、text reconstruction exercises(TREs)におけるペアワーク中の語彙の演習である。そして、最後に、ミニプロジェクトに繋がるオンライン非同期通信である。著者は、このコースデザインと実施の成果、問題点、今後の課題を示す。

This paper describes an ongoing study of students in four sections of a first-year International Communications course that focuses on business English. In this course, the author has facilitated noticing (Schmidt 1990) of specific textual features associated with formal argumentative or colloquial persuasive speech and writing. In recognition of Dokkyo University's commitment to the development of graduates who "can understand specialized content in English, have the ability to engage in discussions, make speeches, and hold debates, and play important roles in international society" (Dokkyo website), the author has implemented supplemental content designed to increase students' awareness of argumentative form native to western rhetorical style so that students will be better able to represent their companies in competitive global markets. This has been accomplished first, through the introduction of core principles of basic features of argument via a podcast designed for English language learners; second, through vocabulary activation during group discussion of the lesson provided in each assigned podcast episode; thirdly, through reinforcement of that vocabulary during pair work in on-line text reconstruction exercises (TREs); and lastly, through on-line asynchronous communication, culminating in a mini-project. The author presents the successes, problems and future plans of this course design and its implementation.

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1. Background

It would be difficult to name a field of study where critical thinking skills are not needed. ESL is no exception. While that is no longer a matter of general debate, there is no wide agreement as to the method by which critical thinking should be taught. Most educators do agree that current methods have fallen short of the mark. Studies conducted from 1993 to 1995 by Japan's Ministry of Education concluded that Japanese students, while generally "ahead of their competitors in the fields of reading, writing, mathematics, and sciences," were nevertheless deficient in problem solving and critical thinking skills. Overemphasis on rote learning and simple knowledge transfer were among the main reasons cited for these deficiencies (Arani 2008: p. 17). Ten years later, this condition had not improved significantly as evidenced by the many articles on the subject suggesting that although there has been change, it has been slow coming. One such article noted that whereas until recently students have been expected to merely absorb what is taught, now "Japanese teachers are beginning to realize the importance of critical thinking" (Loveland 2004: p. 13). There has also been feedback from the business sector as company executives are "realizing that having docile workers is not helpful to their companies in the global economy" (13). One Japanese critic writes that "spiritualism" and a historical "inexperience of democracy" are the two main obstacles to instilling the value of critical thinking (Okumoto 2003: p. 163). These criticisms notwithstanding, Monbukagakusho has made attempts in the last decade to affect curriculum design that teaches the "ability to make impartial judgments" and to "discuss and exchange opinions about information obtained by listening or reading, one's own ideas, etc." (MEXT website).

Now in 2012 there still does not seem to be seem to be any widespread understanding of how to teach critical thinking nor even a general agreement about what critical thinking is.

A useful definition of critical thinking provided at The Critical Thinking Community website is "skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" and it "entails the examination of those structures or elements of thought implicit in all reasoning: purpose, problem, or question-at-issue; assumptions; concepts; empirical grounding; reasoning leading to conclusions; implications and consequences; objections from alternative viewpoints; and frame of reference" (The Critical Thinking Community 2012). While it is acknowledged that recognition of logical structures (and the textual features that denote them) is more a matter of comprehension and not equivalent to critical thinking itself, it is nevertheless a certainty that without the ability to recognize these features, critical thinking cannot easily occur. Assessment of students' writing indicates that many first-year students have insufficient awareness of these features. Therefore, in order to prepare students for the later development of critical thinking skills, the ability to recognize the components of argument first needs scaffolding.

Bufton and I have noted the dual cognitive load involved in learning principles of critical thinking in a second language (Gann and Bufton 2012a: p. 3) and have characterized critical thinking "firstly as a skill set and secondly as an action in which these skills are utilized. As a skill set, critical thinking is used to analyze and assess arguments by viewing each discrete component of a given argument" (Gann and Bufton 2012b: p. 232). Thus, for the purposes of introducing the core principles of critical thinking at the first-year level of a university second language course, maintaining instruction at the language level of vocabulary items was considered to be appropriate; and the efficacy of this approach in identifying, early on, problem areas in students' understanding of argumentative form has been borne out by examples of students' work presented in this paper.

2. Method

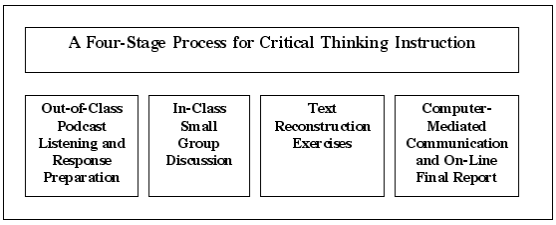
In response to the aforementioned need for critical thinking instruction, starting in 2010, Nicholas Bufton and I developed the podcast series Critically Minded: Critical Thinking for 2nd Language Learners (http://criticallyminded.com). After discussing pedagogical considerations, primarily the importance of in-class time being used for student-student interaction, we decided that the podcast format and a blended learning approach were suitable for both of our teaching contexts.

In terms of content, Bufton and I concurred from the outset that, in order to avoid dual cognitive load that could not be well supported during out-of-class listening, the podcast would avoid teaching critical thinking through social

issues and would instead present a set of critical thinking skills, focusing on the language that is used to form, convey and evaluate argument. Cognitive load was not the only consideration. Bufton and I were also moved by the conviction that even within the context of instruction delivered in students' native language, an Immersion approach (typified by teaching through issues and no explicit skills instruction) is fundamentally flawed. In short, we do not believe that the skills needed to engage effectively in the dialectical are best acquired via trial and error. Bufton and I posit ourselves in Ennis' camp which promotes a Mixed approach, that is a blend of a General approach and Infusion approach (in which skills and principles are treated explicitly) (Angeli 2010: pp. 20-21).

The fourteen-episode series that we have created begins by explaining what an argument is in terms of its components: the premise and the conclusion. During the first three episodes it scaffolds students' ability to distinguish one from the other by identifying lexical features such as premise indicators (because, since, the reasons are, firstly, secondly, opinion, evidence, support); and conclusion indicators (consequently, hence, it follows that, indicates that, must, points to, proves that, shows that, suggests that, therefore, thus). Subsequent episodes present several types of premises: major and minor premises, hypothetical premises and hidden premises. Types of issues are also presented. These include descriptive, normative and prescriptive issues. In-class responses and subsequent on-line performance of first-year students at Dokkyo University as well as other universities supports the practice of maintaining critical thinking instruction at a level of lexical item recognition and use. Although students generally know the meanings of these words, when they are asked to identify the components of an argument in which these indicators are present, they are frequently nevertheless unable to do so. Subsequent episodes provide explicit instruction in major and minor premises and the ability to distinguish between descriptive, normative and prescriptive issues. However, in our first term we were not able to proceed beyond Episode 3.

In my classes I implemented the four-stage process illustrated below:



The Discussion of this paper is concerned primarily with Stage Four but it is important to understand the three preceding stages. Students begin Stage One by listening to *Critically Minded Podcast* outside of class. *Critically Minded* is a scripted podcast and the dialog for each episode is available at our blog. The scripts are also embedded in the mp3 files available for free download at iTunes and can be accessed by single-tapping on the touch screen of most mobile devices.

In Stage Two students bring to class questions and comments concerning parts of the script about which they feel the need to make requests for clarification from other students and, if need be, the instructor. They are also tasked to provide relevant examples from personal experience or general knowledge and to present these in their groups. Of the four stages, presently this is the one most in need of further materials development. In -class discussion is important for establishing the classroom as a community and, as I later suggest, underdeveloped guidance in this stage can show up later in low frequency of computer mediated communication. Ideally, this stage would be carefully scaffolded with introductory examples on the part of the instructor. Podcast Episodes 2 and 3 define argument in terms of premises and a single conclusion, and present the words and phrases that typically indicate each. Accordingly, the instructor might present a short personal account of a situation that required some deliberation on his or her part, emphasizing the distinction between the decision and the reasons for making that decision as well as highlighting the words and phrases that indicate each. The instructor might also present a very short article or advertisement that achieves the same end. Student would then be asked to do the same in small groups. One person from each group might also be asked, in rotation, to present their example on a weekly basis. Such activities result in the activation of central vocabulary items. Moreover, it develops what Rovai calls "connectedness," which he defines as "feelings

of the community of students regarding their connectedness, spirit, trust, and interdependence" (Rovai 2002: p.206). Both vocabulary activation and connectedness are further developed in the following stage.

In Stage Three students work in pairs or triads expressing their opinions on how to successfully complete text reconstruction exercises (TREs). In light of Schmidt's observations that "task demands are powerful determinants of what is noticed" (1990: p. 143) and that "noticing is the necessary and sufficient condition for converting input to intake" (1990: p. 129), Bufton and I created TREs specifically for the purpose of raising students' awareness of salient textual features associated with argumentative and persuasive writing and speech.

Students accordingly are tasked to talk through the exercises in terms of premises and conclusions. Students did the TREs three times during the spring term. During the first session, the TREs were remedial so that students could focus on log-in procedures and navigating through the Hot Potatoes site where the *Web Sequitur* TREs are maintained. The level of difficulty increased during the two subsequent sessions. Hot Potatoes offers students the opportunity to comment after completing each exercise. Review of these comments indicated that TREs were highly motivating. Also, during observation of student-student interaction, students were overheard using meta-talk used in the podcast to engage in problem solving with other group members.

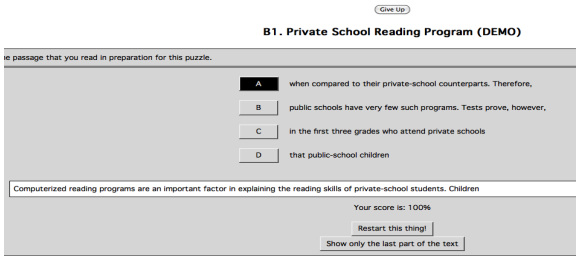


Figure 1. A text reconstruction exercise

As encouraging as this behavior was, Bufton and I remained cognizant of the need for learners to perceive TREs as relevant to the overall course (Brett 1994: p. 332). Thus, in Stage Four, students were tasked to post on-line reports demonstrating the practical ability to analyze arguments. Students posted their reports in a discussion thread at the forum of the *Critically Minded* blog. They were also encouraged to comment constructively on the work of other students.

The topic of these reports was television infomercials available for viewing at YouTube. Students were directed to use the YouTube search engine with words such as *advertisement*, *commercial* or *infomercial*. Students were advised that advertisements lacking explicit arguments to persuade viewers were unsuitable for this assignment. They were also informed that whereas a search for the word *commercial* would turn up all manner of advertisements, the term *infomercial*, being a blend of the words *information* and *commercial*, would lead to more useful content. The first challenge for students then was to distinguish between arguments and non-arguments they viewed at YouTube. After having selected a suitable video, students were then to identify premises and conclusions by the indicators used and write out, to the best of their ability, the relevant segments of the argument by taking dictation from the audio of the advertisement. In some videos this was aided by visual cues. Thirdly, they were tasked to provide a short *distillation* of the argument as a first premise, a second premise and a conclusion. Lastly, they were tasked to comment objectively on the quality of the argument in terms of the reliability of the premise and the logic leading to the conclusion. It was explained that, by *objectively*, what was meant was an analysis that determined a specific target audience and not the student him or herself. As shall be shown in the following discussion, this was evidently a difficult position for some students to adopt.

3. Discussion

During students' work on the report in the fourth stage, it was noted that although the indicator words presented in the podcast were fundamental to most first-year university vocabulary lists, they did not always occur even in advertisements employing cogent arguments. Instead, we noted, premises and conclusions are often only inferred. For this reason, in the event that indicator words presented in the podcast did not appear in a selected infomercial, students were given two options. They could approach the task as a research project in which they helped build a more complete corpus of indicators; or, where indicators were absent, they could add

appropriate indicators in caps or within brackets. Either option was considered an acceptable way to demonstrate a practical knowledge of argumentative form. Lastly, they were tasked to assess the quality of the argument from an objective impersonal perspective.

Many students demonstrated impressive listening skills during the dictation part of the assignment, writing out long portions far beyond the demands of the assignment. Student feedback suggested that they gained confidence and satisfaction during this part of the assignment. Because of the fairly complex nature of the advertisements, students needed to make inferences about what was being claimed based upon a weave of lexical and visual cues. Thus the dictation portion of the assignment went beyond the simple comprehension skills of typical short sentence dictation.

Overall, students successfully completed the assignment. Determining the extent to which their success was the result of their experience in my class is difficult because I do not know if they received prior instruction in critical thinking skills. More instructive are the difficulties some students experienced. I have divided these problems into three types: (1) general failure to recognize argumentative form; (2) general lack of objectivity; and (3) failure to acquire specific critical thinking skills. Following, are several examples of these difficulties.

As for Type 1, one student chose a soft drink commercial featuring a hip-hop performer in a recording studio. The vocalist's performance is lackluster. The producer gives him *soft drink x*. After drinking it, he is able to record a successful song. This kind of commercial presents a special instructional problem. Clearly a statement is being made—in this case: *drink this soft drink and you will be able to achieve important goals that would otherwise be outside your reach*. However, this is not an argument, but a message. This kind of commercial is distinguished from commercials that form cogent arguments in that it makes a claim via compelling rhetorical artifice, but offers no supporting evidence. Nevertheless, in each of my four classes, at least two students selected this kind of advertisement.

Type 2 problems arose most commonly in the argument evaluation stage of the assignment. This involved (1) determining whether the premises were true or false; and (2) whether the premises led logically to the conclusion. Because this assignment did not include evaluation of the reliability of sources (a subject covered in later episodes of the podcast) there was only a limited amount of information available for students. For example, if an advertisement claimed that *juicer x* is able to make 30 percent more juice than other juicers, students, who typically have little experience in using various juicers, had little choice but to accept this claim as true. Unless the advertisement made a claim that was either wildly questionable or expressly false, evaluation of the truthfulness of a given premise came down to a judgment call from the student. In these cases, it seems that the subjective nature of the truth-value evaluation led some students to extend that subjectivity to the conclusion as well. Students who made subjective judgments regarding premises (i.e. it is not cheap because oranges are very expensive) were more likely to offer similarly subjective conclusions such as "I don't need this," or "this product is unnecessary for my domestic life." This sort of conclusion was assessed by the instructor as inferior to one in which the target audience was identified, i.e. "This product is good for large families where the mother and father are both working outside the home."

In order to clarify for students the distinction between subjective and objective perspectives, it was useful to note during class discussion that items could be divided into two categories: first, items that are useful for anyone and everyone; and second, items that are useful for a select group of people. It was noted that *items that are useful for me* would either be a subset of the former or the latter category but would not be a category in its own right. Why? Because the purpose of the assignment was to identify the argument on its own terms, not in terms of each student's personal likes, needs and lifestyle. The following example of one student's work illustrates this point:

Premise 1:Power juicer can make fresh juice easy.

Premise 2:Fresh juice is non-sugar.

Premise 3:It is not necessary to use a kitchen knife, so it is not [dangerous].

Premise 4:We can wash this juicer very easy.

Conclusion:I should buy [this] juicer.

Note how the student's argument undergoes a transition from objective to subjective. It begins with the product in the subject position in the first premise, what the product can produce in the second, an aspect of the product in the third, *we* in the fourth and *I* in the subject position of the conclusion. As language teachers we can teach consistent grammar use as a powerful determinant of consistent logic.

Type 3 problems generally took two forms. The first was a failure to distinguish between one component and another. Although these students had selected an advertisement that formed an argument, they nevertheless had difficulty classifying premises and conclusions. One student listed as Premise 1: "[Kitchen peeler x] can do peeling simply" and then, after listing two more premises, offers this as a conclusion: "[Peeler x] can peel simply!" A conclusion cannot be identical to one of its own premises. This would result in a fallacy known as a tautology or circular reasoning.

The second form of Type 3 problem was a lack of logical connection between premises and conclusions. One reason for this was that in some cases two or more sub-arguments were present in the main argument of the advertisement. The conclusion of each sub-argument functioned as a premise for the main argument. For some students this linear chain of reasoning became tangled. Consequently, although they were able to successfully identify premises and conclusions, they were nevertheless prone to indiscriminately selecting, for example, a premise from sub-argument one, a second premise from sub-argument two and a conclusion from sub-argument three and identifying, as the main conclusion, the conclusion from sub-argument four. Not surprisingly, the result was incoherent. Chain arguments are not yet covered in any Critically Minded episode, and it may be a subject for which Bufton and I create a patch in subsequent terms. Perhaps explicit instruction on chain arguments could result in fewer cases of this kind of problem. Keeping in mind that our purpose is not to avoid mistakes, but to learn, this kind of problem is more likely best addressed after the fact during class discussion.

In the following example, a student has formed a sufficiently successful distillation of an argument as presented in an infomercial for a homemade microwave potato chip maker.

Premise 1:Potato chips are very delicious.

Premise 2:Potato chips are greasy food.

Premise 3:Oily potato chips are bad for [the] human body.

Premise 4:[Product X] can make healthy potato chips.

Conclusion: [Product X] is very good for our health.

In the first two premises, a positive and a negative attribute of store bought potato chips are noted. The third premise shows the relevance of the second premise to health issues. The fourth premise makes the claim that *Product X* can make a healthy potato chip. The conclusion that *Product X* is good for our health demonstrates an acceptable level of practical knowledge of how a cogent argument is formed. There also seems to be an implicit understanding of chain arguments.

It might be argued that the first premise is irrelevant. More importantly, the fourth premise is similar (though not identical) to the conclusion and so detracts from the overall integrity of the argument. Once noted, this problem led to a useful discussion with the student in which she was able to see that her fourth premise represented a jump in logic easily corrected by rewording it thus: *Product X* can make chips that are not greasy. In this way, as much as possible given the little time left in the school term and the limitations of the technology, students were provided with feedback to bring them to a greater awareness of argumentative form.

I might have also noted that the argument mixes modus ponens and modus tollens argumentative forms, but this was another subject covered in a later podcast episode that we had not yet reached. It seemed best to give praise where praise was due and wait to develop more advanced skills in the order of the podcast series.

There were successes involving corpus building as well. Critically Minded Episodes 2 and 3 were never intended as comprehensive lists of premise and conclusion indicators. Nevertheless, there were omissions of some items that arguably should have been included and I was gratified when my Dokkyo students noted these on their own. During the dictation and distillation part of the assignment one student, for example, noted the use of the

phrase *in short* as a conclusion indicator. Thus, knowledge transfer of what was learned through explicit instruction about one set of lexical items was later independently extended toward another set of items—and that is after all, one of the hallmarks of learner autonomy.

4. Conclusion

In this paper, I made a case for critical thinking instruction in university education. Monbukagakusho has shown an increasing awareness of the necessity for critical thinking instruction. There has also been a demand in the business sector for university graduates capable of critical thinking and who can represent their companies globally. English is the lingua franca of the global marketplace and it is therefore appropriate for English teachers to provide instruction in basic critical thinking principles and the lexical items that give them expression. I qualified the approach toward critical thinking instruction at the first-year level as being more properly described as a process of raising students' meta-awareness of argumentative form. I explained the rationale for using Ennis' Mixed approach as a basis for our pedagogy and suggested that, especially in a second-language learning context, that at the first-year level instruction, it is perfectly legitimate to focus on the usage of common *indicator* words in the context of premises and conclusions.

I explained how a four-stage process scaffolds the noticing, recognition and ultimately the autonomous use of recognizable forms such as premise and conclusion indicators. Some examples of problems yet to be worked out were presented. Lastly, I showed examples of students who successfully selected suitable advertisements, identified premise and conclusion indicators, presented focused distillations of arguments, and made critical assessments of claims and reasoning. I also showed examples of cases where my methodology successfully identified some students' misunderstanding of the basic premise, premise conclusion format.

There is a great deal of room for improvement in the fourth stage particularly in discussion threads. I had advised students having difficulty to look at the higher performing students' posts and my comments. However, it was evident that many had not done this. I had also encouraged the higher-level students to leave constructive criticism on other students' post, but very few did. One reason for this is likely insufficient scaffolding of cooperative learning during the in-class discussion stage. Another possible reason is that the discussion thread format did not lend itself to a high level of collaboration. To be accurate, the forum does not support discussion threads as such, but is provided with *Categories*. Each category can hold any number of *Topics*. Users were able to comment on each topic. I gave each student their own topic space and encouraged students to leave comments for their peers. However, there was no systematic organization of some eighty topics. They were simply posted chronologically, in the order that the students posted them with no easy way to navigate through them. Another shortcoming of this format was that it was very difficult to give repeated guidance and final feedback to students' for their work. Still another shortcoming was that it was difficult post links in other students' threads in order to direct their attention to exemplary work of their peers as a guide. In the present term, many of these problems have already been ameliorated by placing students in groups and by having them work on-line within Google Docs the links to which are embedded within discrete discussion threads in the Critically Minded blog forum. It is also my intent to exploit with greater efficiency the positive points of this program.

Lastly, it should be acknowledged that this study could be improved by more quantitative data, particularly data that points to a relationship between text-reconstruction performance before the outset of the program, after podcast episode listening sessions and subsequent in-class discussion, and after the on-line final report. Hot Potatoes makes the collection of this data a simple matter (see Figure 3) and initially it was my intent to collect this data. However, unforeseen logistical problems such as absenteeism made it difficult to place students in the same triads consistently. More careful planning should make it possible to collect data during the 2013-2014 term and it is my intent to present this in a future work.

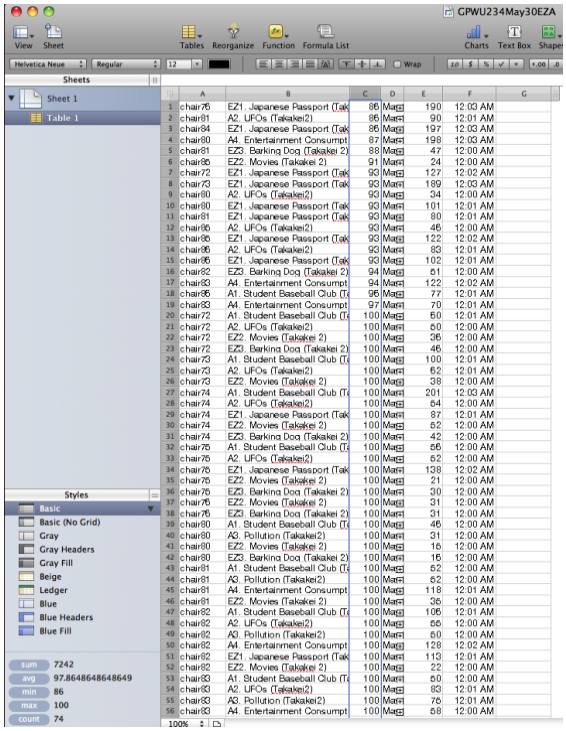


Figure 3

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